Antifungal evaluation of traditional Chinese medicines against clinical Candida isolates

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Objectives: To evaluate antifungal effects of four active constituents of traditional Chinese medicines against candida species and possible combination effect with fluocnazole. Methods: Agar diffusion method was applied to identify the fungicidal effect of Pseudolaric acid B, Gentiopicrin, Rhein and Alion, four constituents extracted from traditional Chinese medicines. Microdillution method was performed as described in NCCLS M-27A document to estimate minimum inhibitory concentrations (MICs) of Pseudolaric acid B against candida spp.. The combination effects of Pseudolaric acid B and fluconazole against azole-resistant Candida albicans strains were also observed in vitro using agar diffusion and microdillution method. Results: Pseudolaric acid B exhibited more notable fungicidal effect against Candida species including Candida albicans, Candida krusei, Candida glaberata, Candida dubliniensis, Candida guillermondi than Gentiopicrin, Rhein and Alion. Synergistic effects of Pseudolaric acid B and fluconazole against azole-resistant Candida albicans were also found. Conclusions: It is supposed that Pseudolaric acid B was a promising antifungal agent and the combination of Pseudolaric acid B and fluconazole may represent an effective strategy to treat infections caused by azole-resistant C. albicans.

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